

In the Matter of:

Inquiry Regarding Carrier Current Systems,  
Including Broadband Over Power Line ) ET Docket 03-104

REPLY TO THE COMMENTS OF  
THE ALIANCE FOR PUBLIC TECHNOLOGY  
(DOCUMENT # 6514284392)

As an FCC-licensed Extra-class radio amateur, I wish to express very strong concern over the current proposal for Broadband over Power-Line transmissions. Insufficient technical justification and assurance of a believable minimal impact on other services are given.

Even a simple analysis, taking account the inevitable unbalance in the signal sent over the power transmission line shows a likely very high interference potential to other services - such as the radio amateur service - operating in the range 1.8 to 30 MHz and 50 MHz bands.

Account is not taken of cross-modulation products produced by the broadband signals as they encounter non-linear loads attached to the transmission line system (such as power rectification systems and switching regulators). The efficient radiator system of an unbalanced transmission line perhaps hundreds of wavelengths in length, combined with frequency spreading caused by the non-linear medium, has the potential - the likelihood - for producing widespread interference over frequencies well beyond the intended band of transmission, and radiating (should the system implementation spread) from literally thousands of miles of transmission line radiator.

In the real world, clauses such as "must not cause interference" to other services, and "must accept interference from other services" do nothing to protect the radio amateur. An individual must live with his neighbors who usually have little technical understanding. Saying "I'm licensed, you must accept interference, and you must cease your computer operation to avoid interfering with me" to a neighbor - or dozens of neighbors - is simply not practical or realistic. The advent of BPL will simply put very many licensed radio amateurs off the air, in the interests of community harmony.

On purely technical grounds, the BPL system as proposed is incompatible with other existing, licensed users of the spectrum.

Regards,

Darrel T. Emerson

FCC licensee aa7fv.